MITSUBISHI MOTOR SALES OF AMERICA, Inc.

TECHNICAL SERVICE BULLETIN

SUBJECT: **OIL ECONOMY TEST**

NO. TSB-96-11-005
DATE July, 1996
MODEL All

CIRCULATE TO:
☑ GENERAL MANAGER ☑ PARTS MANAGER ☑ TECHNICIAN
☑ SERVICE ADVISOR ☑ SERVICE MANAGER ☑ WARRANTY PROCESSOR ☑ SALES MANAGER

PURPOSE

Customer concerns of excessive oil consumption are best resolved by an approach which involves the participation of the owner. If there is no obvious cause, ask the owner to participate in a simple oil economy test. This bulletin contains a form that helps to standardize the test procedure and is highly recommended. When the test is finished, a copy of the completed form is given to the owner, and a copy must be maintained in the service file to support any oil consumption-related warranty claim. MMSA warranty policy is that oil consumption of one quart or less per 1000 miles under normal conditions is considered acceptable.

TEST PROCEDURE

The test begins by interviewing the owner to determine the exact nature of his or her concern. This is an opportunity to learn what the owner's oil economy expectations are, to learn about the type of driving the vehicle is given, maintenance, type of oil used, whether the engine has been overheated or run low on oil or coolant, and so on. It is also a good time to explain the test procedure and the standardized approach outlined in this bulletin.

Next, the owner is asked to participate in an oil economy test which involves periodic visits to the dealership to check oil level and add oil and change the oil and filter. To ensure a frank and open exchange of information, it is important that dealership personnel not take a position regarding the vehicle's condition or oil economy until all test data have been collected and analyzed.

The technician inspects the owner's vehicle to determine possible causes of high oil consumption. During a test drive, observing the exhaust while decelerating can help detect bad valve stem oil seals or worn valve guides. A compression leakdown test can reveal worn or misaligned piston rings, leaky valves, leaking gaskets, or cracked head or block. A coolant check reveals whether oil is escaping into the cooling system. The PCV valve is also evaluated as a possible cause.

Any obvious causes of oil consumption are repaired at this time. Warranty policy determines whether the repair work is covered by warranty or done at owner expense. At the owner's expense, the dealer changes the vehicle's oil and filter to ensure that the oil used during the test is of the recommended service classification and viscosity for the vehicle and climate.

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The owner's manual or service manual for the car and its engine is the authority on the type and viscosity of oil to be used for the oil change and subsequent additions.

The dealer seals the engine crankcase by painting a mark across the oil pan drain plug and sealing the dipstick and oil filler cap with tape in a way that prevents removal without destroying the tape seal.

The oil economy test form is reviewed with the owner, who agrees to to bring the car to the dealership periodically to have the oil level checked and the dipstick re-sealed. With the vehicle on a level surface, allow ten minutes after the engine is stopped after being fully warmed up for oil to drain down into the oil pan before checking the oil. Add oil when the dipstick shows "Add", or when the oil level has dropped one quart or more below the "Full" mark.

The form is used by the service manager or technician to record and verify the mileage and amount of oil added between changes.

To summarize:

- The owner is interviewed by the service manager and/or service advisor.
- The owner agrees to take part in an oil economy test.
- The car is inspected to observe any obvious causes of oil consumption and repaired if necessary. Oil and filter are changed by the dealer at the start of the test, and the crankcase is sealed at the drain plug, dipstick, and oil filler cap.
- The owner agrees that any oil that is added must be added at a Mitsubishi dealership and the form must be signed by a dealer representative.
- The oil economy test data form is explained to the owner, who receives a copy of the form and is told what disposition will be made of the completed forms at the end of the test.

TEST DURATION

Although no specific limits are set for the test, it is recommended that it be about three times the claimed rate of oil consumption. For example, if the oil economy is thought to be about 900 miles per quart, the owner might be asked to take part in a 2700-mile test.

DATA FORM

To simplify and standardize data-gathering, a form like the one included with this bulletin should be used. The dealer is urged to use this form. Copies may be made at the dealership as needed.

CORRECTIVE ACTION

If oil consumption is found to be excessive, take corrective repair action to satisfy the owner commensurate with MMSA warranty policy and procedures.

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OIL ECONOMY TEST DATA SHEET AND VALIDATION FORM

VEHICLE IDENTIFICATION NUMBER_____

TEST DURATION:_____

OIL ADDED DURING TEST:

Event	Mileage	Quarts of Oil Added	Dealer Representative Signature
Start test	A	Full	
	B	W	
	C	X	
	D	Y	
End test	E	Z (full)	

$$\textit{Oil Economy miles per quart} = \frac{\textit{(mileage E - mileage A)}}{\textit{Oil Added (W+X+Y+Z)}}$$

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